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Biotechnology Notes

Volume 7 • Number 3 U.S. Department of Agriculture

March 1994

Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

PUT IT IN WRITING

Got any good ideas about new methods for assessing the risk of genetically modified fungi or bacteria? If so, you have until March 22, 1994 to submit your proposal to USDA's Cooperative State Research Service (CSRS) and compete for a Federal grant.

This year CSRS's Biotechnology Risk Assessment Research Grants Program has \$1.7 million available for projects related to the safety of introducing genetically modified plants, animals, and microorganisms into the environment. The program is administered by CSRS and USDA's Agricultural Research Service (ARS).

Research proposals are peer reviewed by scientists who will be looking for quality, relevance to current regulatory issues, and intent to advance the application of biotechnology to agriculture.

For more details about the program, please see the January 27, 1994 *Federal Register*, pages 3978-3980, or write to either David MacKenzie or Ann Lichens-Park at CSRS/USDA, Ag Box 2220, Washington, DC 20250-2220 (tel: 202-401-4892); or write to Robert Faust, ARS/USDA, Room 336, Bldg. 005, BARC-West, Beltsville, MD 20705 (tel: 301-504-5059).

Copies of the solicitation, the administrative provisions for the program, and the application kit may be obtained by contacting: Proposal Services Branch, Awards Management Division, CSRS/USDA, Ag Box 2245, Washington, DC 20250-2245.

GUNNING FOR BARLEY

Barley is big business in the United States with sales exceeding \$800 million a year, except for those years when yellow dwarf virus or several other diseases ravage a harvest and production plummets. Now, researchers believe they may have found a way to prevent losses and at the same time provide an alternative to the use of chemical sprays.

Using a high-velocity gene gun, University of California scientists Peggy G. Lemaux and Yuechun Wan have succeeded in inserting genes into barley that will potentially yield virus-resistant plants. One aspect of their method that may have led to success is the fact that they split the embryo before delivering the gene. The engineered tissues yielded more than 500 genetically engineered barley plants.

The next phase of the research involves greenhouse testing by collaborators Steven Wyatt at Washington State University and Richard Lister at Purdue University followed by outdoor field tests in California, Illinois, and Idaho. The researchers will be watching the engineered barley to see if it resists the yellow dwarf virus outdoors under natural growing conditions.

Both Lemaux and Wan work out of the USDA/ARS Plant Gene Expression Center in Albany, Calif. To learn more about the project, please call 510-642-1589.

STEINBOCK JOINS ARS

Martha Steinbock, former international affairs specialist in USDA's Office of Agricultural Biotechnology (OAB), has accepted a new position as Technology Transfer Coordinator with ARS in California. Her new address is USDA/ARS/PWA/WRRRC, 800 Buchanan Street, Albany, CA 94710; phone: 510-559-5641; Fax: 510-559-5963.

NEWS AROUND THE NATION (AND THE WORLD)

BST AND CONSUMERS: SURVEY INDICATES ACCEPTANCE

In a recently completed telephone survey of 1,004 consumers, results show BST (bovine somatotropin) will not affect milk consumption for most households. The survey indicated that consumer confidence increased significantly after individuals were presented scientific facts attributed to either the American Medical Association, the Food and Drug Administration (FDA), or the National Institutes of Health. Many said they had little confidence in groups that oppose BST.

Most of those polled knew little or nothing about BST or biotechnology before the interview began. They said they were interested mainly in the safety of the product but also expressed a desire to learn more about testing procedures and research results. Consumers also said they would like a toll-free hotline available for further information. The survey was developed and analyzed by Thomas Hoban, Associate Professor, Department of Sociology and Anthropology, North Carolina State University, for the Grocery Manufacturers of America. It was conducted by ICR Survey Research Group. To receive a copy, please call Hoban at 919-5153180; Fax: 919-515-2610.

FDA SEEKS PUBLIC COMMENTS ON BST LABELING

The public has until March 14, 1994 to submit comments on a notice published by the FDA in the February 10, 1994 *Federal Register* concerning guidance for labeling milk from cows not treated with BST (bovine somatotropin). The guidance is meant to help states when considering the proper regulation of BST labeling claims. FDA intends to rely primarily on the enforcement activities of states to ensure that BST labeling claims are truthful and not misleading.

For more information about the notice, which is called "Interim Guidance on the Voluntary Labeling of Milk and Milk Products from Cows That Have Not Been Treated with Recombinant Bovine Somatotropin" (Docket No. 94D-0025), please call Shellee David at FDA at 202-205-4681.

NEW FUNDING FOR GENOME PROGRAM

The Department of Energy (DOE) has \$3 million available under a new grant program to fund genome mapping and sequencing of microbes with potential energy or environmental applications. DOE is encouraging cooperative agreements between universities, companies, or Federal laboratories. The project is managed by the Office of Energy Research. For more details, please call Jay Grimes at 301-903-4183.

SIGNING ON TO BIOTECH E-MAIL NETWORK

It's easy to subscribe to the Biotechnology Education and Public Policy (BCEPP) e-mail network out of Madison, WI, says director Thomas Zinnen. To join, first send the following one-line e-mail message:

SUBSCRIBE BCEPP firstname lastname
via Internet to: listserver@relay.adp.wisc.edu

Once subscribed, send messages for posting on the BCEPP list via Internet to: BCEPP@relay.adp.wisc.edu

Still confused? Write to: Tom Zinnen, Biotechnology Education Specialist, University of Wisconsin Biotechnology Center and UW-Extension, 1710 University Ave., Madison, WI 53705. His e-mail address is: zinnen@macc.wisc.edu.

ATP: NEW SOURCE OF FEDERAL FUNDING

The Advance Technology Program (ATP) at the National Institute of Standards and Technology (NIST), a part of the Department of Commerce, funds promising, high-risk technologies with substantial potential for enhancing U.S. economic growth. According to the February issue of *BT Catalyst*, a publication of the North Carolina Biotechnology Center, program funding for ATP ranges from \$80 million to \$300 million over a 5-year period, while individual projects receive \$2 million to \$20 million over 3 to 5 years. The ATP does not fund product development but rather supports laboratory prototypes and proof of feasibility.

On January 12, NIST held a workshop on "Focused Programs in Biotechnology" to seek input on future areas for program funding. A few fields mentioned included computational chemistry, environmental biotechnology, bioprocessing, and DNA technologies. A competition will be announced in April. To learn more about the program, please call 1-800-287-3863; Fax: 301-926-9524; e-mail: atp@micf.nist.gov.

CLASSES OFFERED IN MOLECULAR BIOLOGY

Two organizations are offering advanced classes in biotechnology this year. The Catholic University's Center for Advanced Training in Cell and Molecular Biology in Washington, DC will hold classes this summer in a wide variety of subjects including recombinant DNA methodology, DNA sequencing, plant biotechnology, and in vitro toxicity testing. Classes run from May through July. For details, please call 202-319-5276; or send a fax to: 202-319-4467.

Biotechnology Training Programs Inc. in Newmarket, NH, is also offering courses in biotechnology techniques at various universities around the country. For a complete schedule, please call Susannah Chance at 1-800-821-4861; Fax: 603-659-4708.

NABBING POACHERS WITH DNA

The BC Institute of Technology in British Columbia, Canada reports success using DNA fingerprinting to match meat organs and other parts of poached animals to dead

carcasses left behind. The test is similar to the one used to identify criminals and confirm paternity. The test could help reduce poaching of valuable wild animals, reported the *Vancouver Sun*, January 26, 1994.

IN CASE YOU WEREN'T THERE

■ OAB Director Alvin Young discussed insect and disease resistance, the difficulties in collecting germplasm from around the world, genome mapping, pharming, and public education to students majoring in agriculture and environmental sciences, Feb. 18, at Alfred State College of Technology in Alfred, NY. The school is a leading College of Technology within the State University of New York system. It is also one of the few universities in the country that offers a 2-year Associates degree in Agricultural Biotechnology. The program is tailored to train young men and women in the laboratory techniques that are needed by the emerging biotechnology industry. For more information, please call Richard Hoffman, Curriculum Coordinator, at 607-587-4711.

■ Maryln Cordle, senior regulatory specialist, USDA/OAB, presented a paper entitled "Biotechnology's Opportunities Beyond BST" at the Western United Dairy Convention, February 17, in Redding, CA. She cited examples of how biotechnology might improve the quality and nutrition of dairy products in the future through modification of genes expressing casein and whey proteins. Cordle urged the industry to look beyond BST and be more engaged in shaping how biotechnology can help the dairy industry remain competitive and provide safer, more nutritious and affordable products in the next century.

Turning to the role farm animals play in the development of new drugs for humans, Cordle said sheep have been genetically transformed to secrete human alpha-antitrypsin, which is approved in the United States for therapy of genetically deficient people at high risk of developing emphysema. Sheep have also been transformed genetically to produce a substance to control cystic fibrosis. Goats, too, have been genetically modified to secrete TPA (tissue plasminogen activator), an expensive-to-produce cardiovascular drug used to dissolve blood clots during heart attacks. Transgenic pigs have been produced with human hemoglobin in their blood -- a possible source of blood for transfusions that eliminates the risk of HIV infection and hepatitis. For a copy of Cordle's remarks, please fax a request to 703-235-4429.

NEW PUBLICATIONS

- "Intellectual Property Rights: Protection of Plant Materials." Summary of a workshop held in Washington, DC, January 26-28, 1993. Published by the Crop Science Society of America. Call 608-273-8080 to order a copy or send a fax to 608-273-2021.
- *Silk Polymers: Materials Science and Biotechnology*. Edited by D. Kaplan, W. Adams, B. Farmer, and C. Viney. Published by the American Chemical Society. December 1993. For details about ordering call 1-800-ACS-5558.
- "Aquatic Biotechnology and Food Safety." Prepared by the Organization for Economic Cooperation and Development. 1994. For details about ordering, write to OECD Publications, 2 rue Andre-Pascal, 75775 Paris Cedex 16, France.
- "Perils Amidst the Promise: Ecological Risks of Transgenic Crops in a Global Market," by J. Rissler and M. Mellon, Union of Concerned Scientists. December 1993. For information about ordering, please call 202-332-0900; Fax: 202-332-0905.

UPCOMING MEETINGS

March 10-11: Public Voice's 1994 National Food Policy Conference: "New Frontiers in Food and Agriculture -- Can Federal Policy Keep Pace?" Conference includes a session on biotechnology products and issues. Washington, DC. Sponsored by Public Voice for Food and Health Policy in cooperation with the National Food Processors Association. For details call 202-659-5930; Fax: 202-659-3683.

March 24-28: Society for Advancement of Chicano and Native Americans in Science. Annual Conference. Chicago, IL. Call 408-459-4272 for details.

April 20-21: Fourth New England Animal Biotechnology Symposium. Storrs, CT. For registration and abstract information call 203-486-3231 or send a fax to 203-486-5221. For information about graduate scholarships and submission of abstracts (deadline April 1), call Steve Zinn at 203-486-0861.

April 25-27: Algal Biotechnology Trends and Opportunities, 2nd Asia-Pacific Conference. Singapore, Republic of Singapore. For details write to Secretariat, 2nd Asia-Pacific

Conference on Algal Biotechnology, c/o Department of Microbiology, National University of Singapore, Lower Kent Ridge Rd., Singapore 05111, Republic of Singapore; Fax: 65-776-6872.

May 3-6: "Biotechnology Applications in Space." University Park, PA. Penn State Biotechnology Institute. For course details call Patricia Phillips at 814-863-3650; Fax: 814-863-1357.

May 18-19: Meeting of USDA's Agricultural Biotechnology Research Advisory Committee. Washington, DC. Call 703-235-4419 for more details.

May 23-24: NABC6: "Agricultural Biotechnology and the Public Good." East Lansing, MI. For details write to NABC, 159 Biotechnology Bldg., Cornell University, Ithaca, NY 14850-2701; or call 517-355-0123; Fax: 517-353-5406; e-mail: 18215emh@ibm.cl.msu.edu

June 4-7: 1994 Congress on Cell and Tissue Culture: "Regulation of Cell and Tissue Differentiation." Research Triangle Park, NC. For details call 410-992-0946; Fax: 410-992-0949.

June 7-11: "The Pacific Rim Biotechnology Conference." San Diego, CA. Sponsored by the International Federation for the Advancement of Genetic Engineering & Biotechnology and *Genetic Engineering News*. Call 301-652-3072; Fax: 301-652-4951 for details.

June 12-17: Plant Cell and Tissue Culture, 8th International Congress. Florence, Italy. Call 39-55-476-377; Fax: 39-55-476-393.

June 19-25: International Association for Genetics in Aquaculture, 5th Symposium. Halifax, Canada. Write to Pamela Gaines, Marine Gene Probe Lab., Biology Dept., Dalhousie Univ., Halifax, NS B3H 4J1, Canada.

June 25-28: "Second International Weed Control Congress." Copenhagen, Denmark. Co-sponsored by the International Weed Science Society and the European Weed Research Society. For details write to ICS, International Conference Services A/S, Strandvejen 171, P.O. Box 41, DK-2900, Hellerup, Denmark.

July 3-8: "Seventh International Congress of Bacteriology and Applied Microbiology Division and the Mycology Division." Prague, Czech Republic. Sponsored by the

Czechoslovak Society for Microbiology. For details write to SCS Travel Agency Ltd., IUMS Congresses '94, Boticka 4, 128 00 Prague 2, Czech Republic; or call 42 2 297 698; Fax: 42 2 299 955.

July 24-28: American Phytopathological Society Annual Meeting. Acapulco, Mexico. Write to APS, 3340 Pilot Knob Rd., St. Paul, MN 55121.

Aug. 8-12: International Marine Biotechnology Conference '94. Tromso, Norway. For details write to: Harlyn O. Halvorson, Director, Policy Center for Marine Bioscience and Technology, University of Massachusetts Dartmouth, Dartmouth, MA 02747-2300; Fax: 508-999-8901.

Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Any comments or suggestions may be sent to USDA/OAB, Room 1001, Rosslyn Plaza-E, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Phone: 703-235-4419; Fax: 703-235-4429.

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